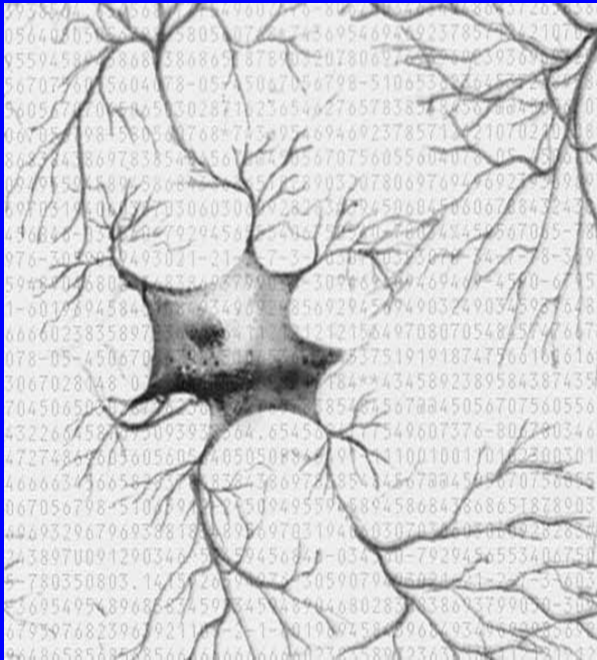


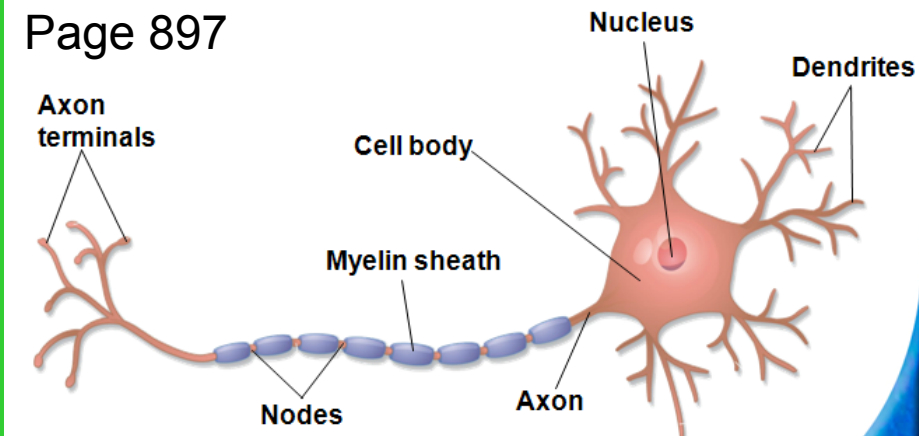
Neurons (Nerves)



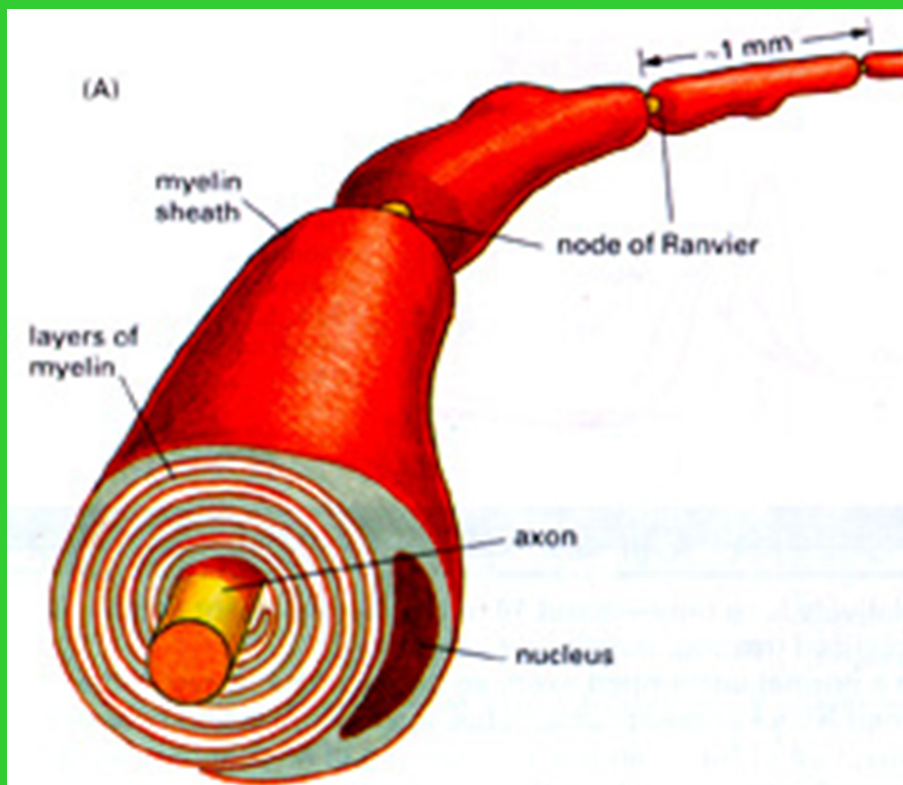
- Neurons carry nerve impulses throughout the body
- Neurons are classified by the direction that they carry a nerve impulse
 - **Sensory Neurons** send a nerve impulse from the sensory organs to the spinal cord and brain
 - **Motor Neurons** carry a nerve impulse from the brain and spinal cord to muscles and organs
 - **Interneurons** link sensory nerves and motor nerves

Structures of a Neuron

Page 897



- Dendrites receive information
cell body processes info.
- Axon extends the length of the neuron
impulse will be passed to a neurotransmitter
- Myelin sheath = fatty protein that covers the axon, insulator - Speeds up impulse
- Nodes of Ranvier are sections between the myelin sheath

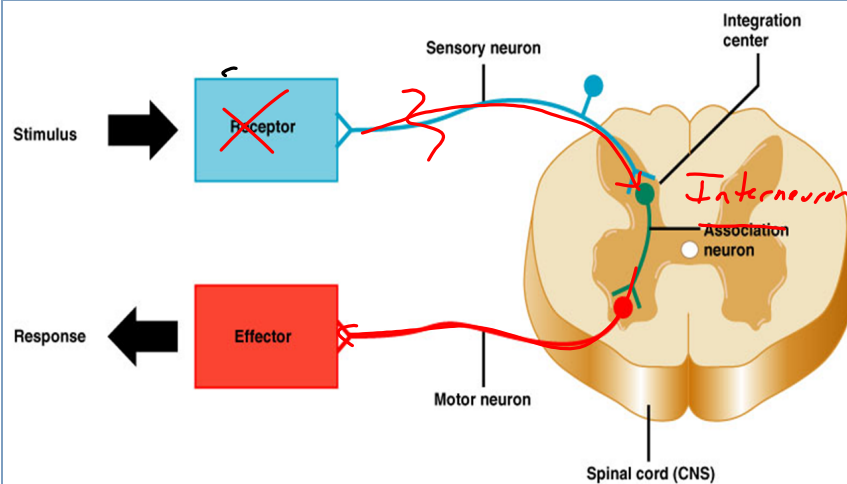


Neural Circuits

- Nerves are linked together in circuits
- Circuits take information from the external or internal environment, carry it to the brain then send it to the area of response (muscles, heart etc.)
- Order = sensory nerve-interneuron-motor nerve

Reflex Arcs

- Simplest neural circuit is the reflex arc
- Reflex arc is almost instantaneous
- They occur without thinking (the response is done before the brain can register the reaction).
- Maybe an evolutionary response?
- We have several reflex arcs
- Ex. Knee jerk, pupil dilation



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